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10/759,304

01/20/2004

Tsutomu Matsuo

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10/31/2005

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EXAMINER

HAMMOND, BRIGGITTE R

ART UNIT

PAPER NUMBER

2833

DATE MAILED: 10/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/759,304

Applicant(s)

MATSUO ET AL.

Examiner

Brigitte R. Hammond

Art Unit

2833

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 8/17/05.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 8, 15-19 and 21-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-14 and 20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 November 2004 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

#### ***Claim Objections***

Claim 11 is objected to because of the following informalities: it is unclear to the Examiner exactly what applicant is trying to convey with "the guiding slopes are offset in a zig-zag fashion. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,2,4-7, 9-14 and 20 are rejected under 35 U.S.C. 102(b) as being unpatentable over Pickles et al. 6,390,857. Pickles et al. discloses a transmission board comprising: a pair of upper and lower surface boards 4 having at least one transmission circuit with connection pads 9 on a surface thereof; a frame body 2 for supporting said pair of surface boards on upper and lower sides thereof and having at least one plugging end that has a plurality of guiding slopes 13 on each upper and lower edges thereof for guiding a plurality of terminals of a mating connector toward said connection pad.

Regarding claim 2, the plurality of said surface boards 4 are spaced at a constant distance by said frame body such that said transmission circuits are opposed to each other.

Regarding claim 4, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Pickels et al. by constructing the boards to have a layer of air or material having a relative permittivity and a dielectric loss tangent that are lower than those of a glass reinforced epoxy resin, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious engineering choice. In re Leshin, 125 USPQ 416 (CCPA 1960).

Regarding claims 5 and 9, the transmission circuits include at least one ground 15 circuit and at least one signal circuit 14 provided on an outside and an inside of said surface board, respectively, and said connection pads are provided on said outside, with said signal circuit is connected to said connection pad through said surface board and least one ground connection pad provided on said outside and spaced from said plugging edge 10 but close to said signal connection pad, and said ground connection pad provided with an extended portion that is aligned with said signal connection pad.

Regarding claim 6, the transmission board further comprises at least one projecting guide (tip of 10) extending from an end of said plugging edge 10 in a plugging direction such that upon plugging with a mating connector, the projecting guide enters a corresponding groove 34 of said mating connector before said plugging edge abuts against a terminal of said mating connector and having at least one raised portion on a top or bottom face thereof.

Regarding claim 7, said transmission circuit provided on an inside (surface) of said surface board is connected to said connection pad provided on an outside at a position relatively close to an edge of said surface board.

Regarding claim 10, (as best understood), the guiding slope has a different sloping angle than the connection pads.

Regarding claim 11, (as best understood), the guiding slope is in a plugging direction.

Regarding claim 12, said plugging edge has a top face (see fig. 4) higher than said surface board on a side adjacent to said surface board.

Regarding claim 13, said frame body is provided with at least one projecting guide 8 that projects from said plugging edge in a plugging direction and has a vertical length that is larger than that of said plugging edge.

Regarding claim 14, the projecting guide is tapered in both vertical and horizontal directions (see fig 3).

Regarding claim 20, Pickles et al. disclose the frame body being provided with two said plugging edges 10,10, one of said plugging edges is provided at an end with a projecting guide 8 that projects in a plugging direction and has a vertical width larger than that of said plugging edge.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable Pickles et al. in view of Lemke et al. 6,692,272. Pickles et al. disclose the invention substantially as claimed except for the circuits have a characteristic impedance of approximately 100 ohms in differential operation. However, Lemke et al. discloses circuits having a

characteristic impedance of approximately 100 ohms in differential operation. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Pickles et al.

### ***Response to Arguments***

Applicant's arguments filed 8/17/05 have been fully considered but they are not persuasive. In response to applicant's argument that "Pickles et al. is not composed of a pair of surface boards but only one circuit board". The Examiner disagrees and draws Applicant's attention to fig. 2.

### ***Conclusion***

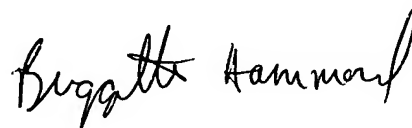
Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brigitte R. Hammond whose telephone number is 571-272-2006. The examiner can normally be reached on Mon.-Thurs. and Alternate Fridays from 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on 571-272-2800 ext. 33. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Brigitte R. Hammond  
Primary Examiner  
Art Unit 2833

October 27, 2005